

## **Landfills and Open Dumps**

### **Hurricanes Irma/Maria Response to Recovery Transition Report**

#### **Background.**

In the aftermath of Hurricanes Irma and Maria approximately 3.9 million cubic yards of debris have been generated. This includes hazardous debris, vegetative debris, construction and demolition debris, as well as municipal trash. The Commonwealth of Puerto Rico currently has approximately 29 lined landfills and open dumps throughout the island. The Commonwealth has had difficulty obtaining accurate and reliable information regarding the amount of waste contained in the landfills and open dumps. Additionally, the Commonwealth has also had difficulty determining the available/remaining capacity for the landfills and open dumps. Landfill disposal of the Hurricane-related waste will take up much of the remaining capacity in the Commonwealth's landfills. The objective of the landfill assessment MA is to determine the remaining life/space of landfills across the island.

**Mission Assignment Number.** 4339DR-PR-EPA-12

#### **Mission Assignment General Description.**

As directed by and in coordination with FEMA and at the request of the Commonwealth, Environmental Protection Agency will provide assistance to the Puerto Rico Environmental Quality Board by conducting capacity assessments at landfills and open dumps across the island.

**Mission Assignment Funding Ceiling and Funds Expended.** Ceiling \$850,000. Current expenditures are undetermined since the MA work commenced on 4/15/18

**Specific Project Under the Mission Assignment.** No MATOs or specific projects were identified for this Mission Assignment.

#### **Description of the Response Work Accomplished.**

Tasks may include, but are not limited to:

- Site visits to landfills and dumping sites
- Aerial Surveying
- Review of existing capacity and design
- Review of operational documentation
- Review of regulatory and permit requirements.

EPA will also assist in determining whether the previously disposed debris from Hurricane Maria poses a threat to the public health and safety of Puerto Rico citizens. EPA is responsible for providing personnel and/or equipment necessary to accomplish the mission.

## 1. Current Status and Desired End State of the Project.

EPA commenced work on this Mission Assignment on 4/15; an initial kick-off meeting for this project was held on 4/16/2018. The purpose of this meeting was to determine the protocol for conducting the initial assessments, the records review, detailed aerial or land based surveys, as well as to prioritize the assessments and surveys. To date, EPA has conducted one initial assessment, at the Toa Baja Landfill.

## 2. Challenges.

The biggest challenge of this MA is the short time-frame that EPA has been given to accomplish the MA. The current expiration date of the MA is 5/17/18, which provides EPA only 4 to 5 weeks to determine the remaining landfill capacity. This timeframe is clearly inadequate to accomplish the MA. EPA has not received confirmation from either FEMA or EQB that this MA will be extended past 5/17. Although it is thought that most of the 11 landfills will have adequate existing documentation necessary to document the remaining capacity, the remaining facilities will require more in-depth analysis. It is unclear if there will be adequate existing documentation to make accurate capacity determinations.

## 3. Data and Information Collected.

EPA and RST will generate locational data that will be stored in Response Manager, and will therefore be available on EPA's Common Operating Picture (Maria/Irma Viewer). All collected and generated assessment and survey data will be maintained and stored on the Maria/Irma SharePoint Site

## 4. Point of Contacts.

Name	Agency/ Organization	E-mail	Cell	Mission Role
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## **5. Recommendations to Recovery Team**

Because it is likely that this MA will not be completed by 5/17/18, and EPA has not received any indication from FEMA or EQB that an extension of the MA will be granted, calculating of remaining landfill capacity may have to be conducted under Recovery activities, where funding is an uncertainty.

A detailed evaluation of potential safety threats and environmental impact of the 29 landfills and open dumps will have to be undertaken as part of a comprehensive Recovery project.

While considered under the current emergency response MA, characterization of existing pre-storm waste storage, as well as estimates of waste deposited since the storm, was determined to be unachievable given the short time frame. A Recovery project should be undertaken to fully characterize the waste present in all of the Commonwealth's landfills and open dumps.